Inside Wallops

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Goddard Space Flight Center
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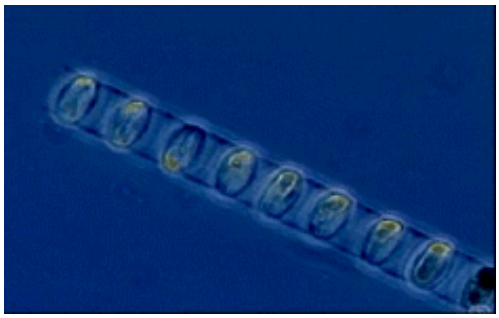
NASA Development May Help Solve Ocean Biology Problem

NASA and university scientists have made a breakthrough in using satellites to study the tiny, free-floating ocean plants, called phytoplankton. The plants form the base of the ocean food chain and produce half of the oxygen in the air we breathe.

The development opens the door to solving a problem that has stymied ocean biologists for more than a century, and is revolutionary to our understanding of how ocean biology and ecosystems, as well as carbon cycling, respond to climate variability and change.



NASA Photo

Microscopic organisms called phytoplankton may not amount to much individually, but counted in the trillions, they play a major role in keeping the Earth's biosphere in balance.

Data about the growth rate of the ocean plants can be derived from space and incorporated into global estimates of their life processes. New, accurate information will greatly advance understanding of marine ecosystems and how they function, including issues related to fisheries, water quality, and harmful algal blooms.

This research contributes to improved computer models that enable predictions of how climate change will alter ocean ecosystems and the Earth system.

"While the full potential of this discovery awaits further work, what is really amazing is that a signal detectable from space has been found that tracks changes in the activity, not just abundance, of phytoplankton," said Michael Behrenfeld, a professor at Oregon State University, Corvallis, Ore., and a researcher at NASA's Goddard Space Flight Center. Behrenfeld maintained a lab in Greenbelt and did extensive research under the Observational Science Branch at Wallops Flight Facility.

In order to determine ocean productivity, which is the rate of photosynthesis, scientists must know plant growth rates and their abundance. Satellites can detect variations in the color of light within the ocean, and researchers use this information to tell phytoplankton amounts. The new method for recording growth rates by satellite involves advances in the way these satellite ocean data are analyzed.

"Satellite ocean color images are kind of like your television screen, where you have controls for the color setting and controls for brightness," said researcher Dr. David Siegel. "What we've done here is use both the color and brightness signals to determine plant greenness and the number of individual phytoplankton cells."

With this new information, researchers can calculate growth rates from the greenness of the individual phytoplankton cells. When cold water temperatures, bright light, or low nutrients put stress on phytoplankton, they lose pigment and appear less green. Phytoplankton will become greener when conditions improve and growth rates increase.

For further information visit: http://www.nasa.gov/vision/earth/lookingatearth/plankton.html

Wallops Shorts…..

In the News
Eastern Shore News
"NASA Balloon Makes Record-Breaking Flight"

Thanks from the CREAM PI
"On behalf of the CREAM collaboration, I would like to thank the recovery crew for working so hard, particularly Allen O'Bannon and Mark Wefel for their outstanding recovery support in the extreme environment, and Mike and Ralph for helping all the way to the end with packing.

Our special thanks to the Twin Otter pilots, who made the complete recovery possible in time, Tina Green and David Sullivan for their dedicated support on the Ice throughout the campaign. Neither the record breaking flight nor complete recovery of the CREAM payload this season would have been possible without the strong support and cooperation of NASA Headquarters, NASA Wallops Flight Facility, National Scientific Balloon Facility, National Science Foundation, and Raytheon.

On behalf of the CREAM Team, our appreciation to each of you. Thank you from the bottom of my heart."

Eun-Suk Seo
University of Maryland

On This Date.....

February 16, 1961
Wallops Island, Va.

NASA Explorer IX was placed in orbit by a four-stage Scout booster from Wallops Station.

This was the first satellite launching from Wallops and the first satellite boosted by a solid-fuel rocket.

Explorer IX was a 12-foot diameter sphere after inflation at orbital altitude.

Buddy Program for New Hires

The Office of Human Resources in cooperation with the New Employee Welcoming Board (NEWB), is offering a pilot "Buddy" program that helps civil servant new hires smoothly transition into the work force at Goddard Space Flight Center. Trained civil servant volunteers act as ambassadors for the new hires during their first few days of employment, showing them where resources are located, answering basic questions about Goddard's culture.

Members of the NEWB will provide basic training to each Buddy. Some of the responsibilities of the Buddy will be -

* to accommodate their new hire for a maximum of two weeks with questions/ concerns, usually by phone

* following OHR's orientation, the Buddy will meet the new hire and escort him/her to his work assignment area

Buddies are a tremendous asset to the new employee, helping them get on track quickly and effectively. Encourage and refer individuals to be effective buddies for your directorate. Interested persons should call Marcellus Proctor on x66-9402 or email: Marcellus.A.Proctor@nasa.gov

Experienced Math Tutor

Will come to your home from Accomack County to Pocomoke. Tutoring in Algebra, Geometry, Trig., Calculus I. $12-15/hour. Call (757) 824-0546 for more information.

For Rent

Chincoteague (Built in 2001), 2 bedroom, 2 full baths, fully furnished duplex for rent year round or shorter terms can be arranged. $950.00 per month includes; all utilities, extended CATV, and local Verizon telephone service. Unit has central air/heat, screened in porch with a custom built picnic table, and 27" TV/ VCR. Will accommodate up to 6 people. Must have good references, credit and security deposit. Call (757) 824-3299.

Space Flight Adventure

Virginia Space Flight Adventure is a week-long residential summer camp sponsored by the Virginia Space Flight Academy for students (aged 12-15), interested in learning about the science and engineering of rockets, robotics, balloons and space flight.

The camp is held at Wallops Flight Facility, and is supported by NASA, the U.S. Navy, NOAA, the Eastern Shore Regional Partnership, and the Mid-Atlantic Regional Space Port.

The camps run from June 19 through August 19. For further information, contact Robert Marshall at (757) 824-3800.

Debedeavon Toastmasters International

The name of the new Wallops club, Debedeavon Toastmasters Club, honors the rich history of the Eastern Shore. Early court records indicate that the "emperor," also referred to as "king of great Nusswattocks" and the "laughing king of the Accomackes," ruled the Eastern Shore of Virginia Native Americans. Debedeavon, this sachem's name, is the earliest emperor on records in the United States.

Debedeavon Toastmasters Club meets every other Wednesday at the Cropper Center just outside the NASA main gate. Meetings begin promptly at 11:30 a.m.

The following individuals serve as Executive Officers for the club:

President: Tom Connolly (x1970)
Treasurer: Kim Crockett (x1803)
Secretary: Joy Brister (x2390)
Sergeant at Arms: Glenn Luckett (x2590)
VP of Education: Pat Dworske (x2126)
VP of Membership: Valerie Mackritis, (x2419)
VP of Public Relations: Terry Ewell (x1133)

If you would like to speak with confidence and become an effective communicator, then Toastmasters can help you find your voice. The "learn-by-doing" program allows you to progress at your own pace in a supportive environment.

Call Kim Crockett at x1803 or Terry Ewell at x1133 and sign up today.

Watch the Daytona 500 at the Rocket Club, Sunday, February 20

Doors open at 12:30 p.m.

Race starts at 1 p.m.

Bring a covered dish to share

Sympathy is extended to the family of Ellouise B. Mears, who died at her home in Atlantic on February 10.

Mears retired from NASA Wallops Flight Facility as a procurement specialist. She is survived by a daughter, a sister, one granddaughter and two great-granddaughters.

Memorial donations may be made to the Atlantic Fire Company, P. O. Box 207, Atlantic, Va., 23303.

EAP Lunch N' Learn

March 1, 2005
11:30 a.m. - 12:30 p.m.
Williamsburg Room - E2 Building

Join Tom Northern, for a "Cognitive Spring Cleaning"

See if we can try to get rid of the cobwebs that keep us "stuck" in disfunctional patterns. Bring your lunch and join us for an informative lunch hour!

Inside Wallops is an official publication of Goddard Space Flight Center and is published by the Wallops Office of Public Affairs, Extension 1584, in the interest of Wallops employees. Recent and past issues of *Inside Wallops* also may be found on the NASA Wallops Flight Facility homepage: www.wff.nasa.gov
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